

Schematic of the Longitudinal Section of Extraction tubes with:
(A) Sol-gel Coating
(B) Sol-gel Monolithic Bed

FIG. 1

Introduction of the Extracted Sample into GC

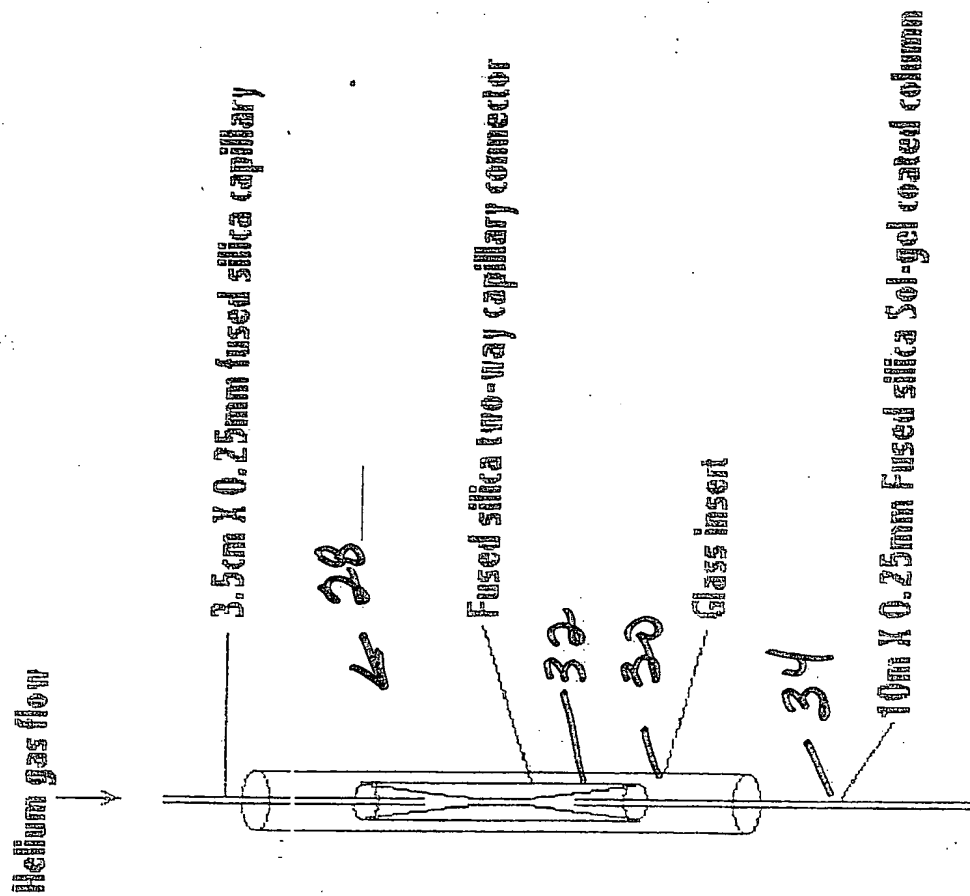
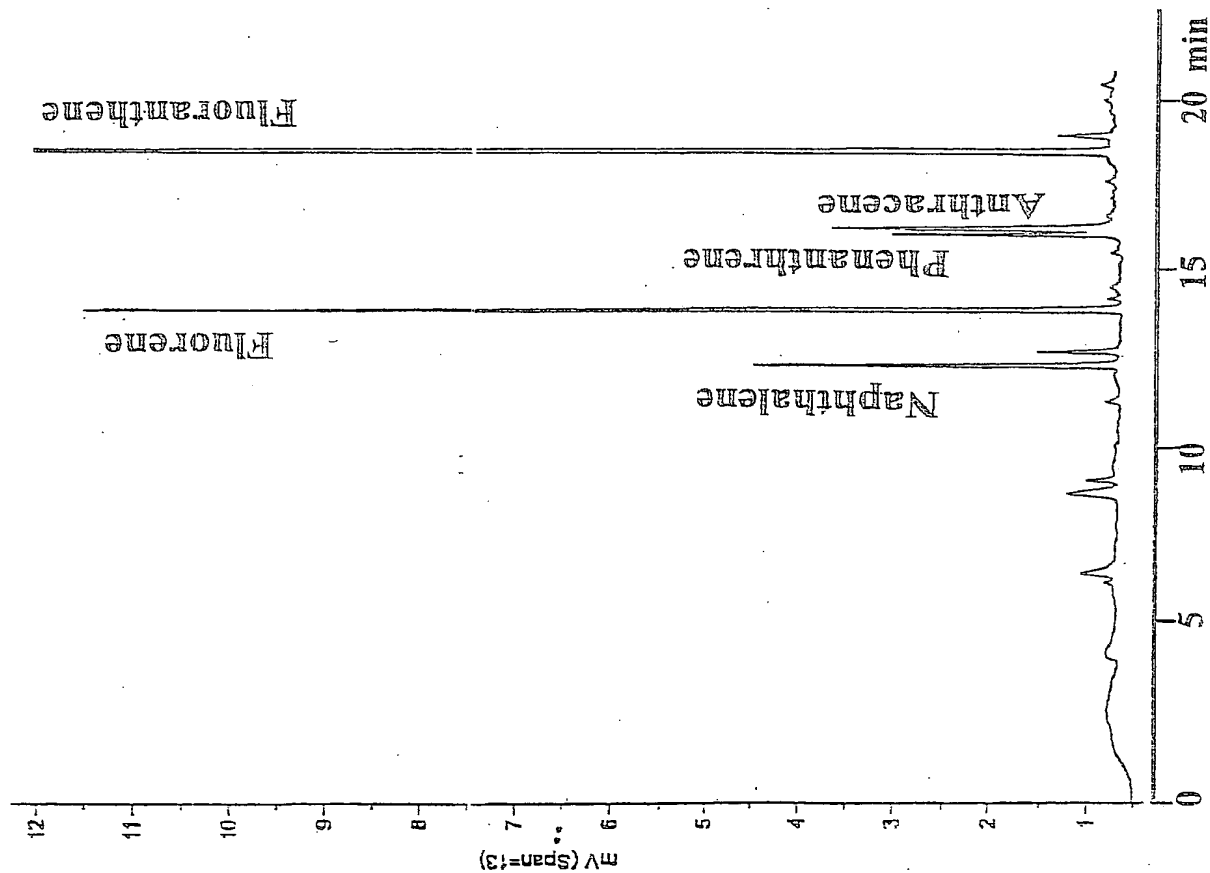


Figure 2

Capillary Microextraction of PAHs from Water



Extraction Conditions:

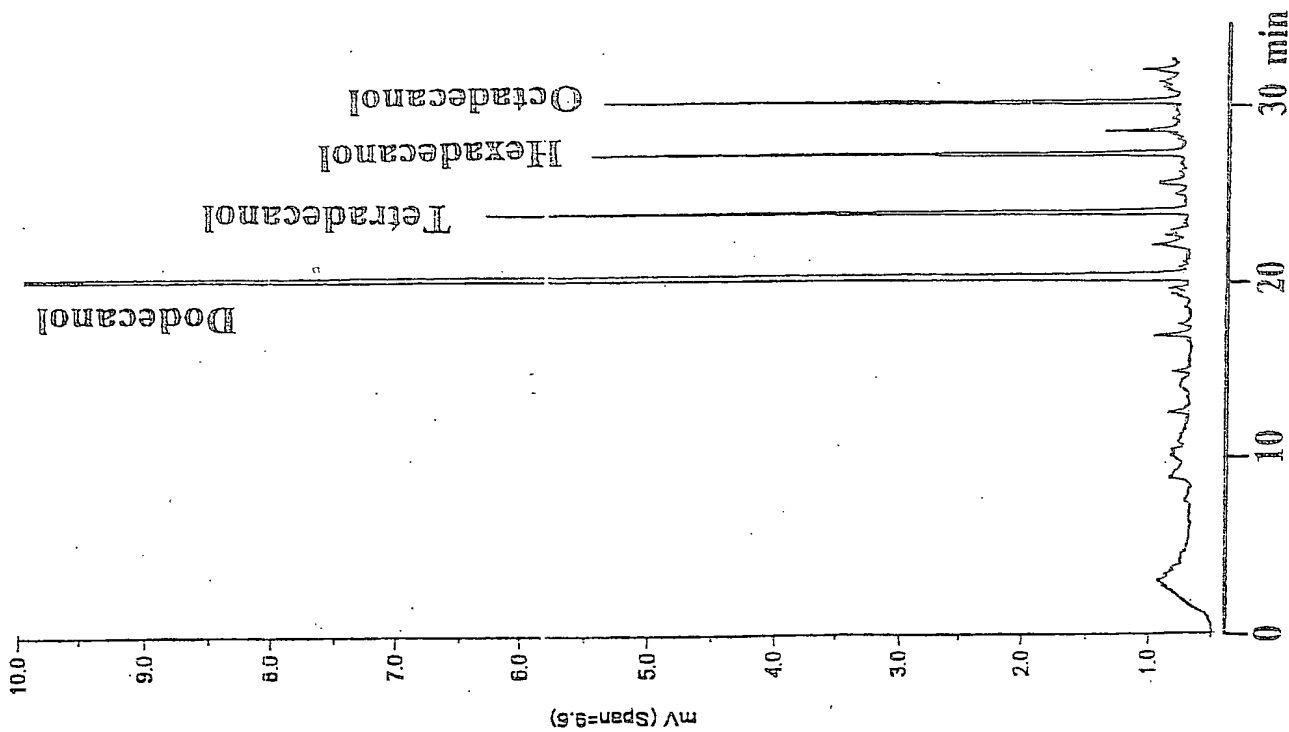
Sol-gel PDMS coated capillary
(35 mm x 250 μ m i.d.)
Extraction for 30 min

GC Conditions:

Sol-gel PDMS Column
(10 m x 250 μ m i.d.)
30°C (5 min), @ 6°C/min

Figure 3

Sol-Gel Capillary Microextraction of Alcohols

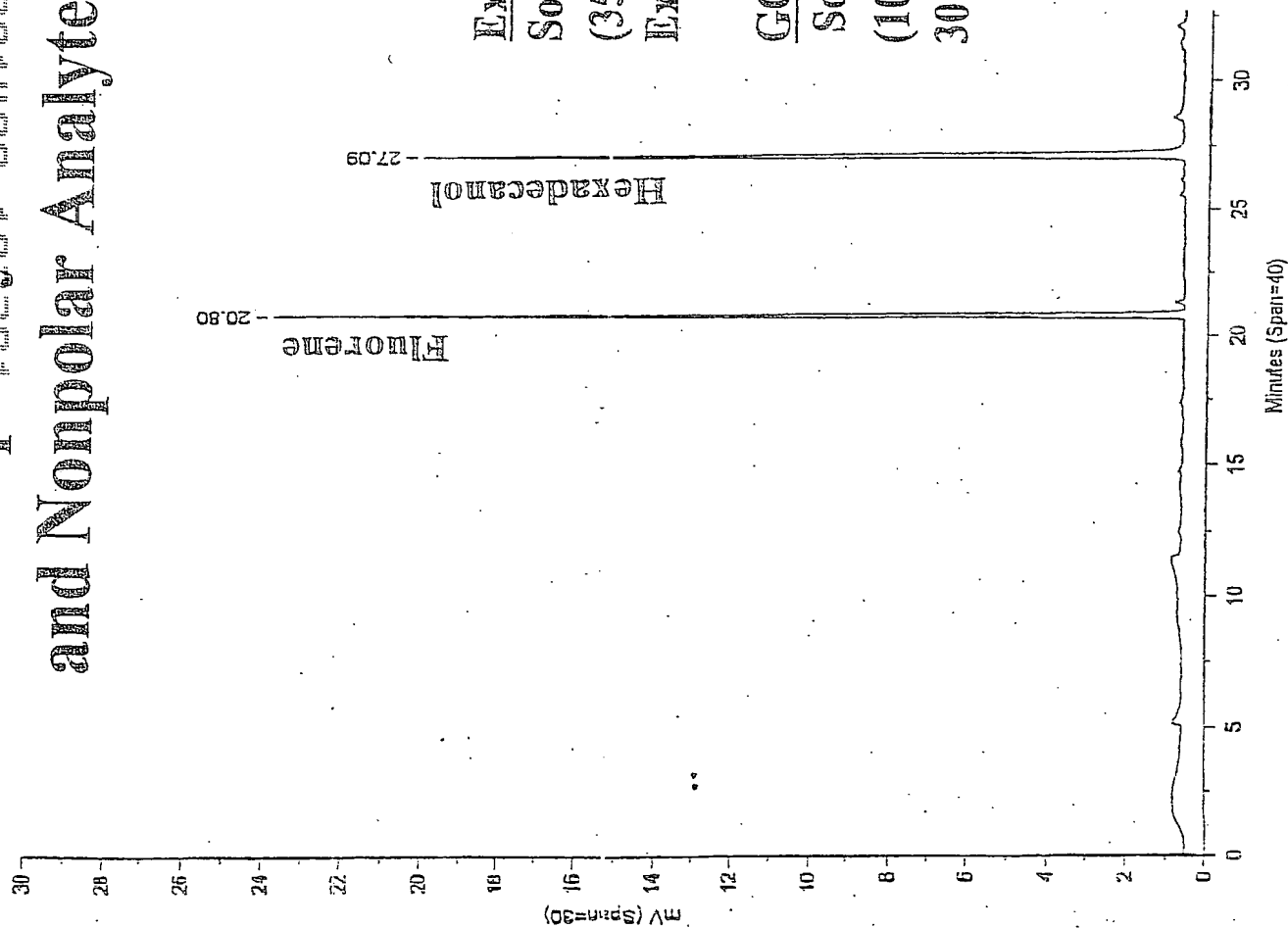


Extraction Conditions:
Sol-gel PDMS coated capillary
(35 mm x 250 μ m i.d.)
Extraction for 30 min

GC Conditions:
Sol-gel PDMS Column
(10 m x 250 μ m i.d.)
30°C (5 min), @ 6°C/min

Figure 4

Sol-Gel Capillary Microextraction of Polar and Nonpolar Analytes from Water



Extraction Conditions:

Sol-gel PDMS coated capillary
(35 mm x 250 μ m i.d.)
Extraction for 30 min

GC Conditions:

Sol-gel PDMS Column
(10 m x 250 μ m i.d.)
30°C (5 min), @ 6°C/min

Figure 5

Mixture of 7 diff. comds

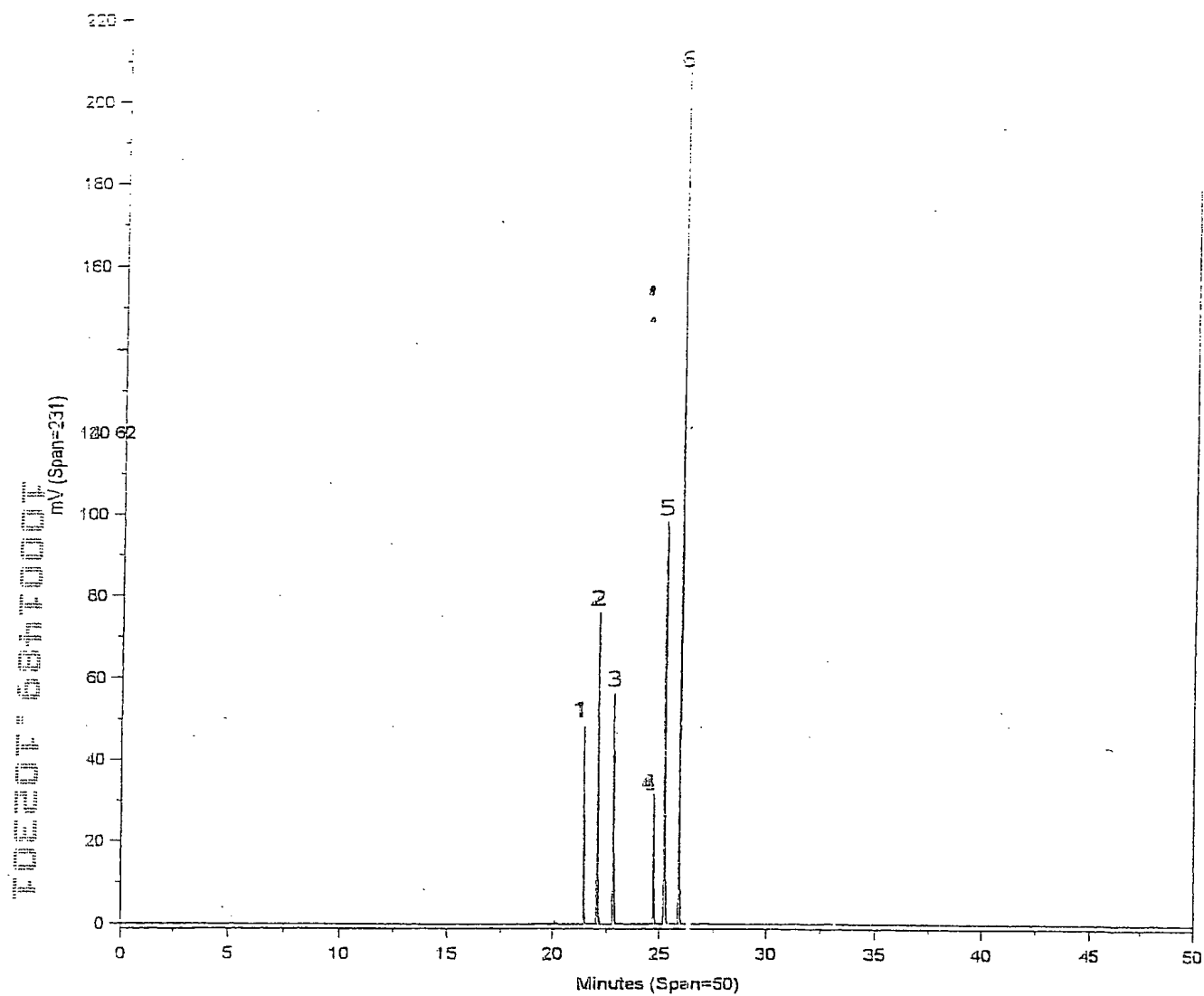
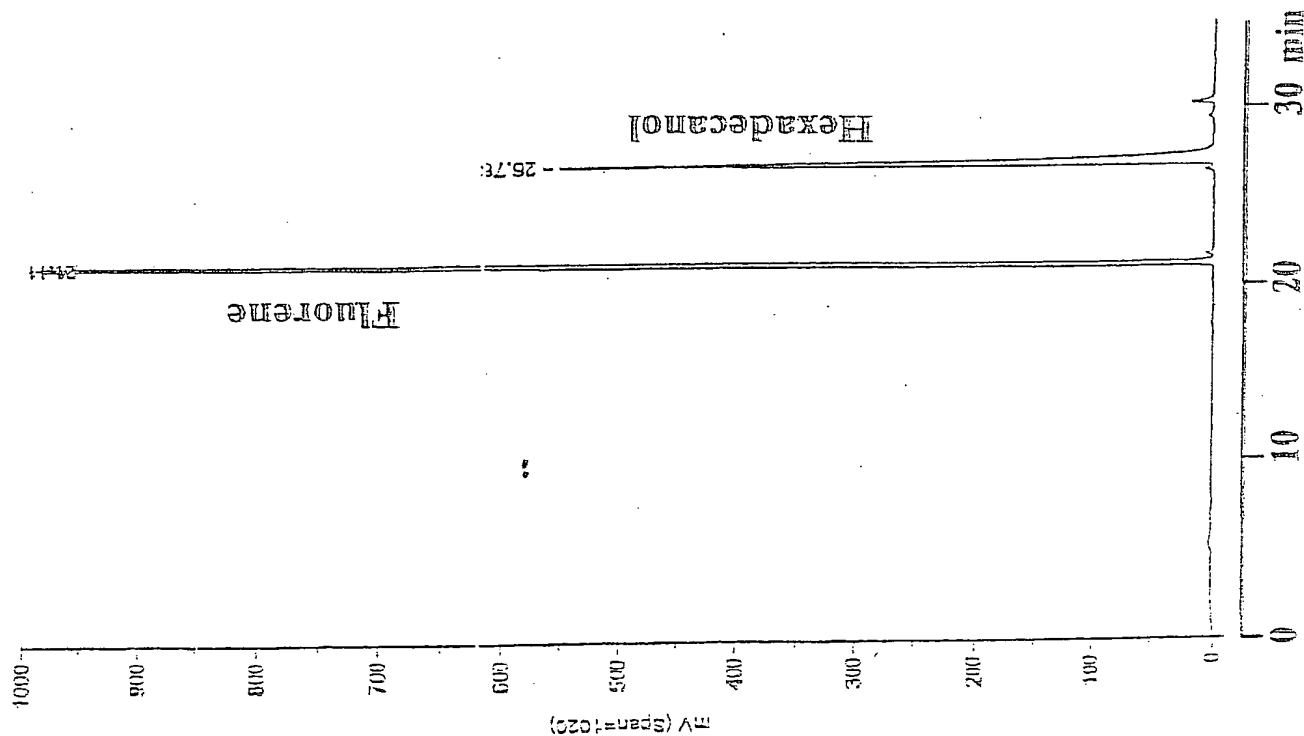


FIG. 6

Capillary Microextraction on Monolithic Bed



Sol-Gel ODS Monolithic Bed

35 mm x 50 μ m i.d.

1 ppm

Extraction for 30 min

Desorption at 300°C

GC Conditions:

Sol-gel PDMS Column

(10 m x 250 μ m i.d.)

30°C (5 min), @ 6°C/min

Fig. 7

FOOT SHOOT

Capillary Microextraction: Monolithic vs. Open Tubular

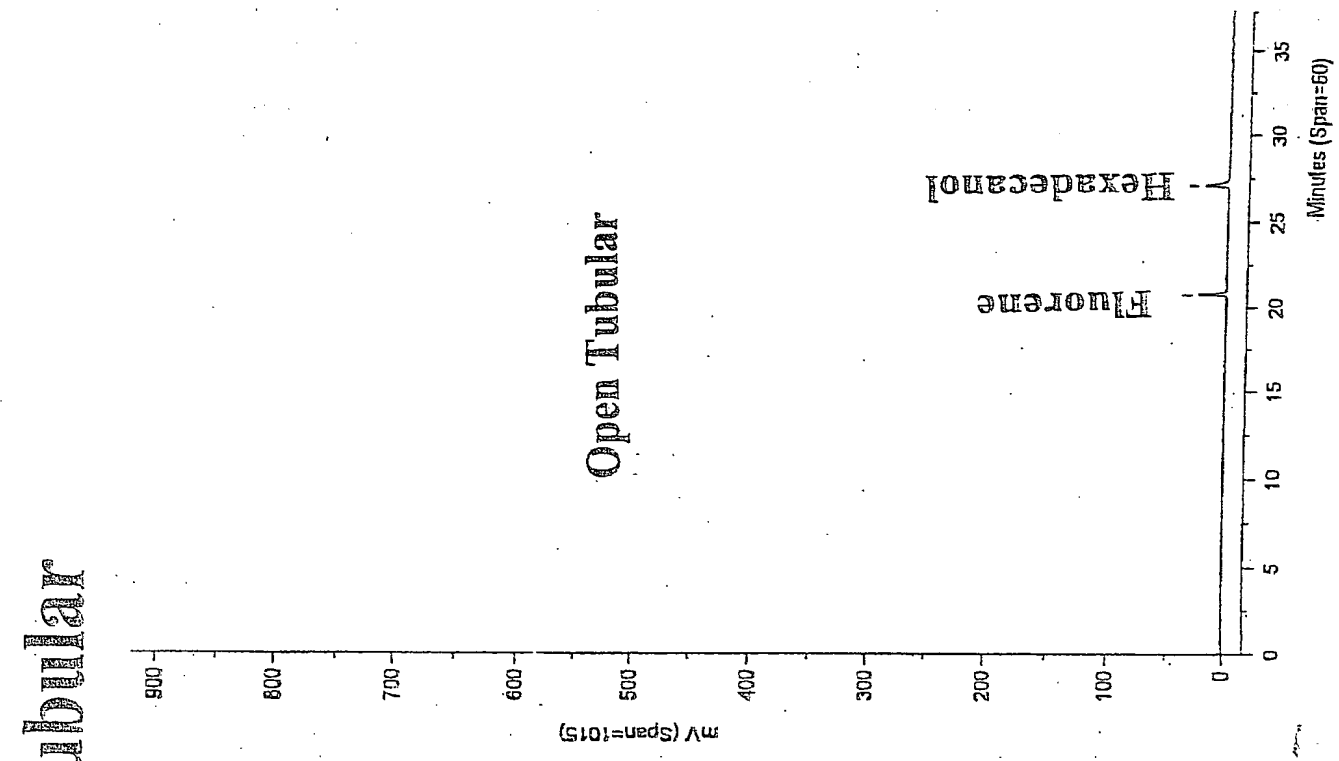
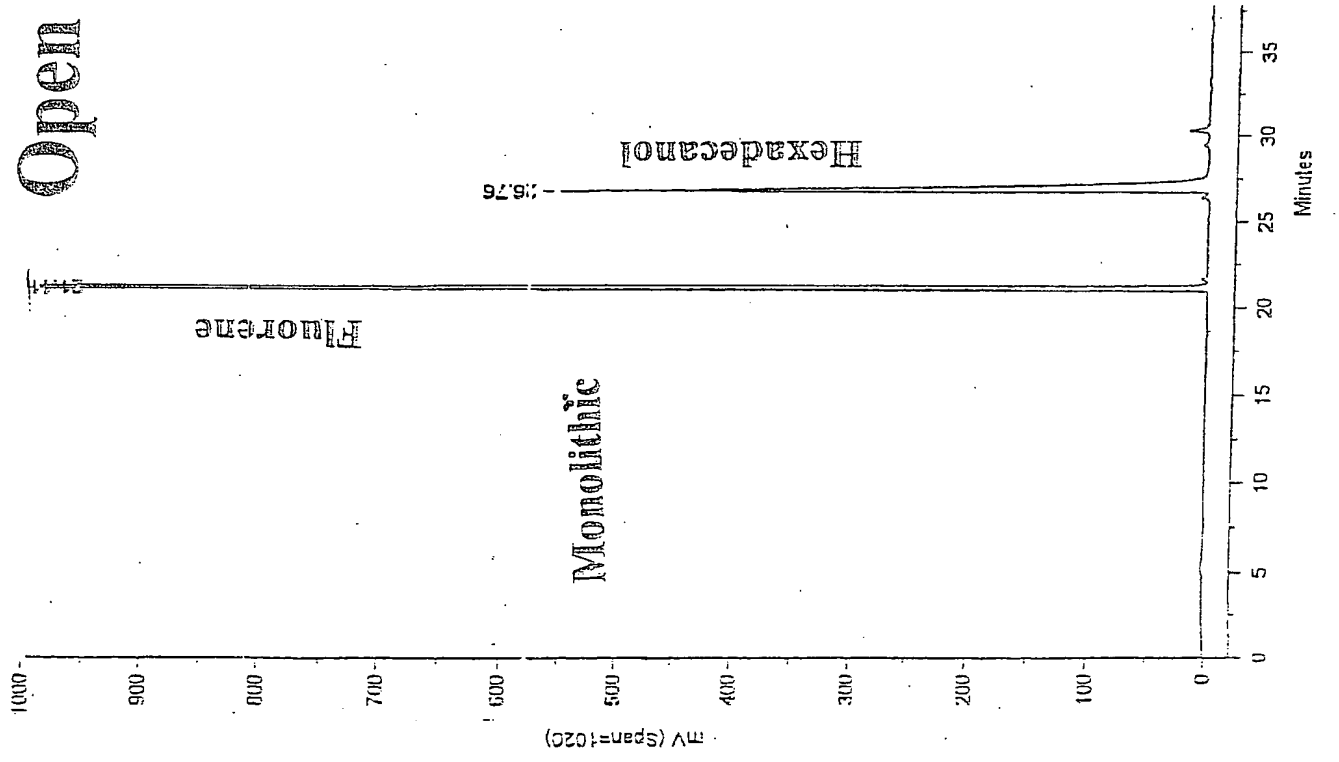


Fig. 8

Gravity Feed Extraction System for Capillary Micro-Extraction

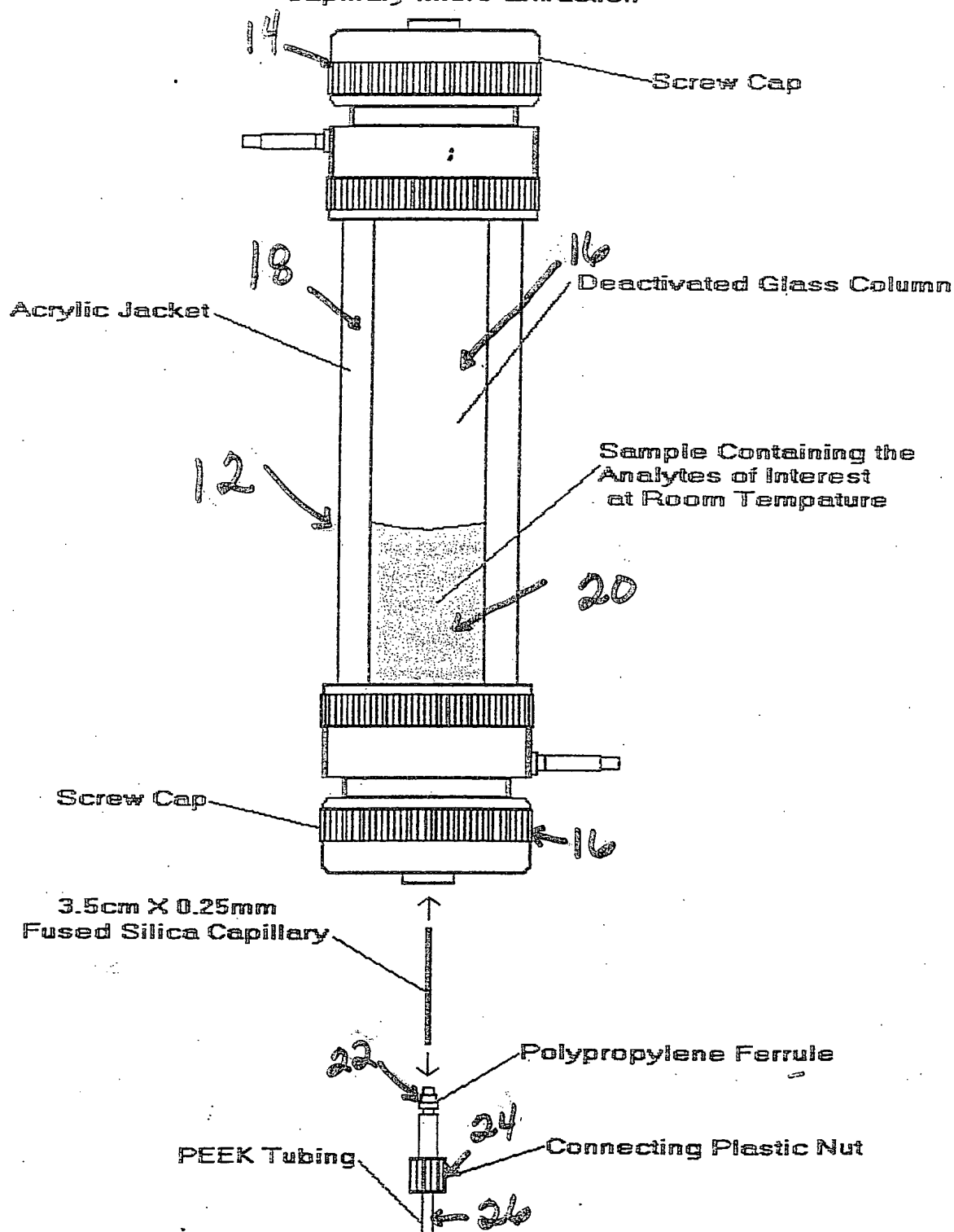


FIG. 9

10001489 103301

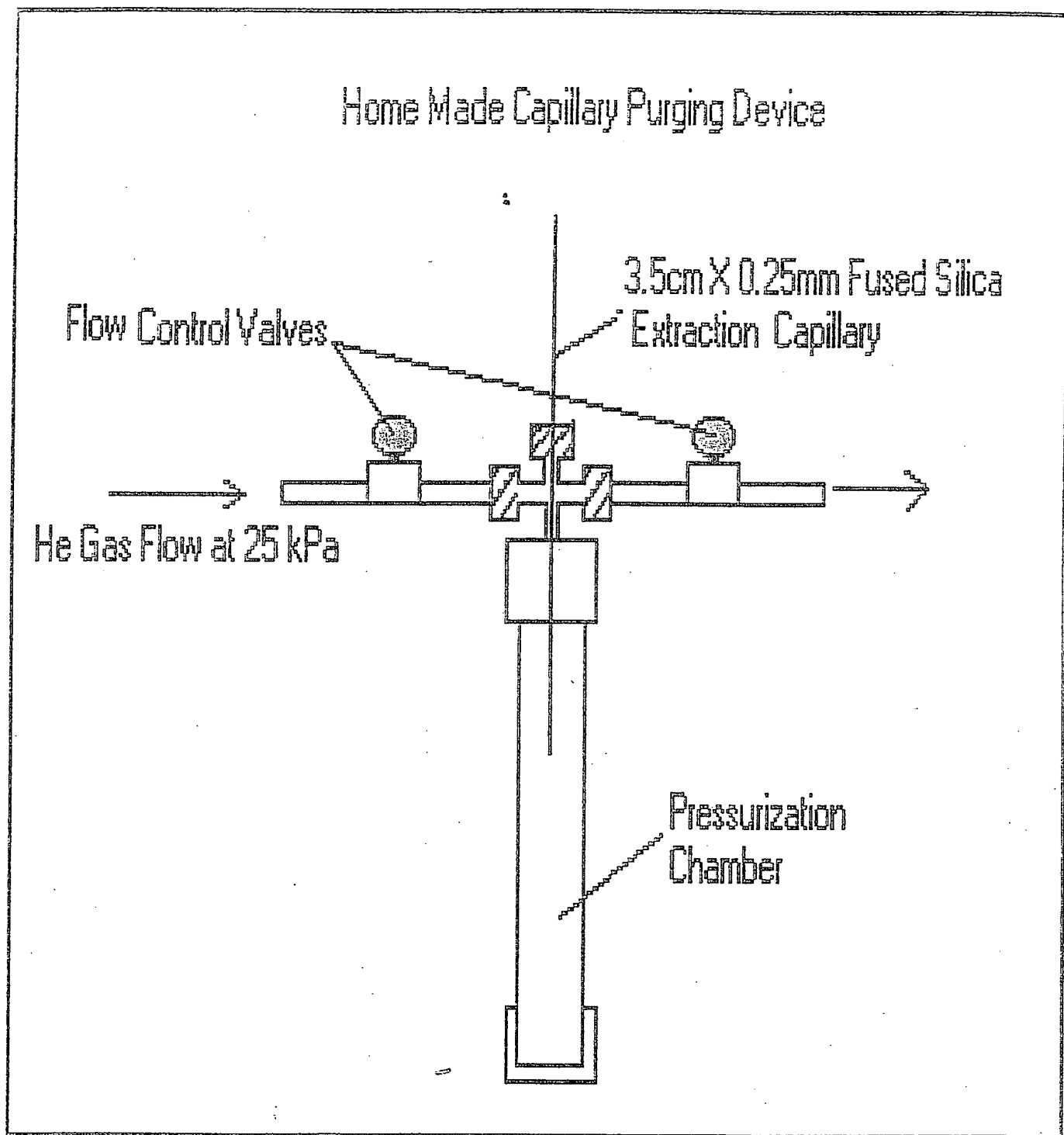
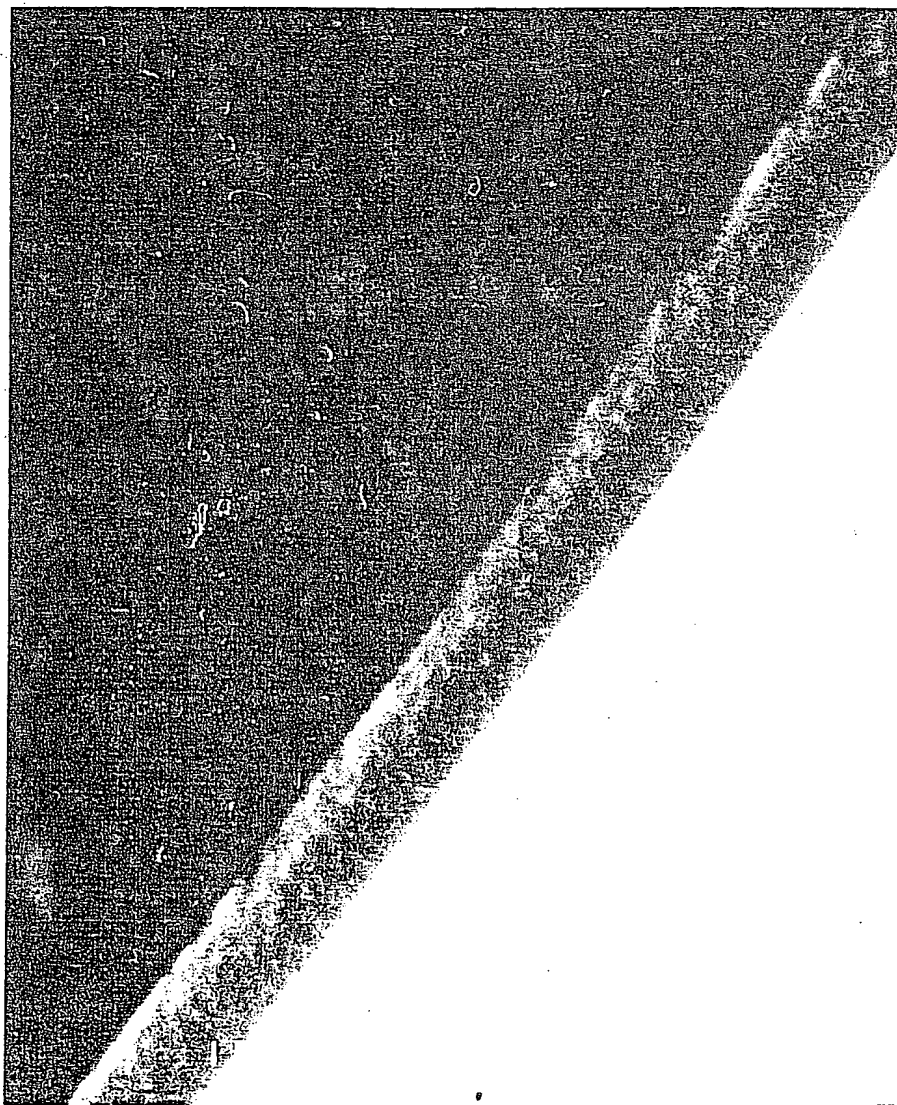


FIG. 10

FIG. 11A



10001489-102301

(Figure 4A)

10001489-102301

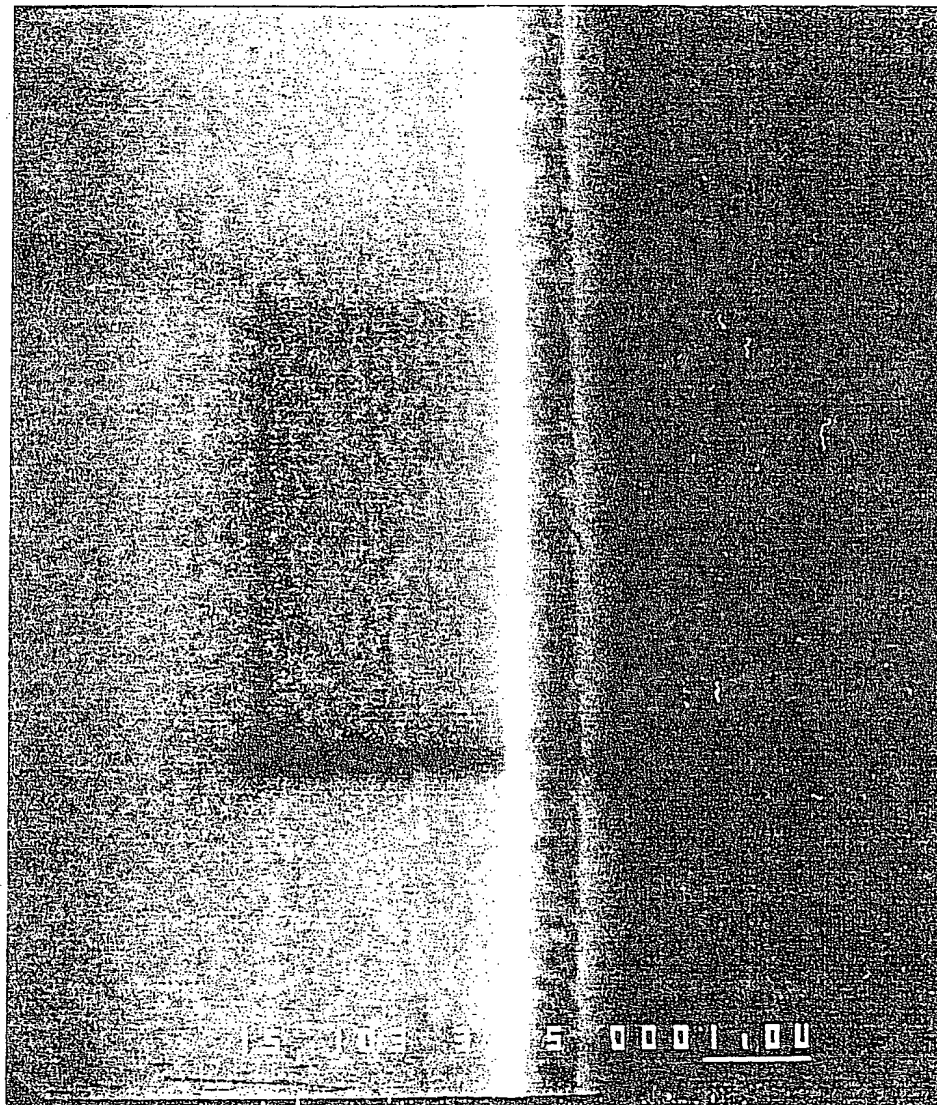


FIG. 11B

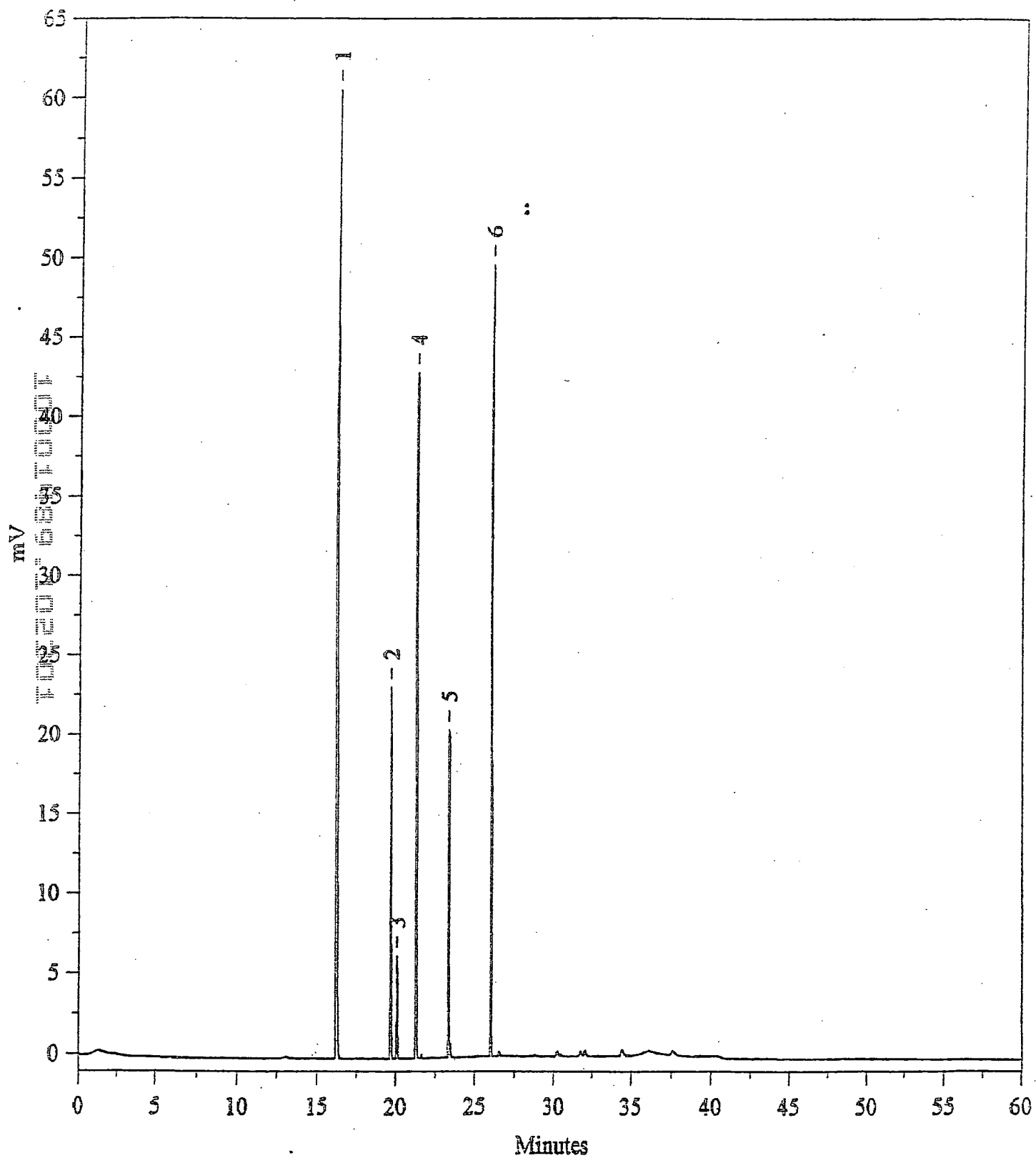


FIG. 12

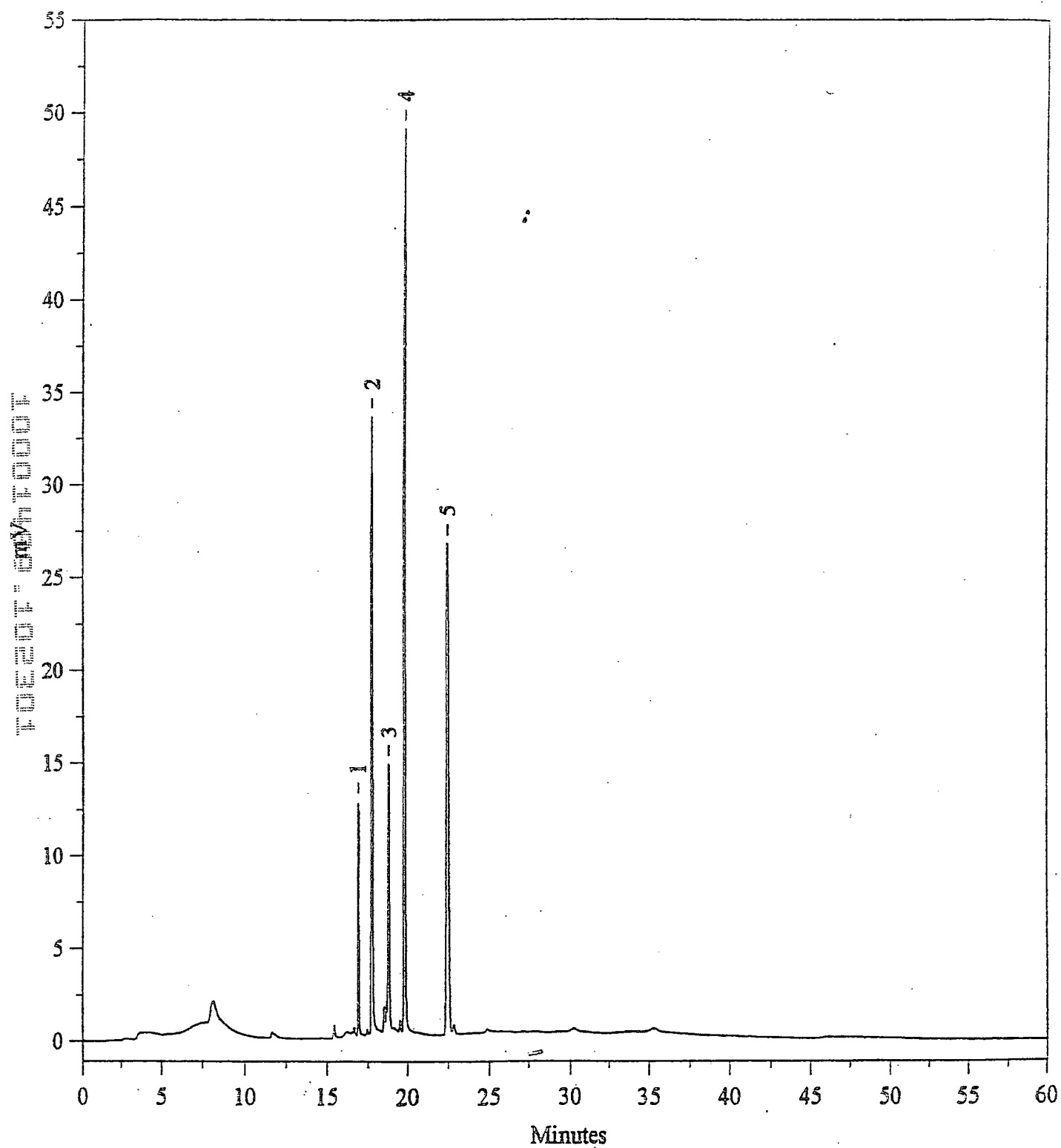


FIG. 13

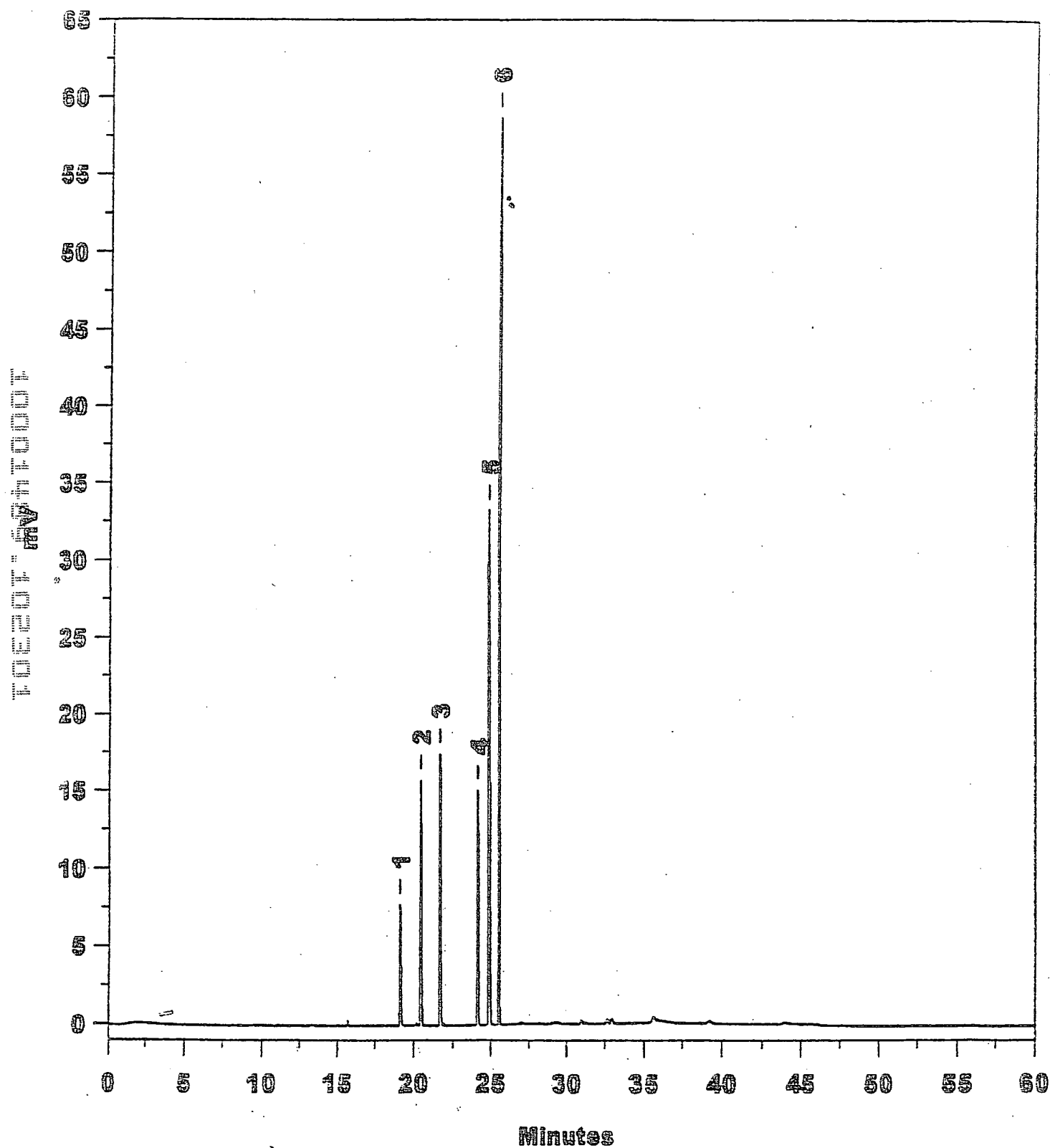


FIG. 14

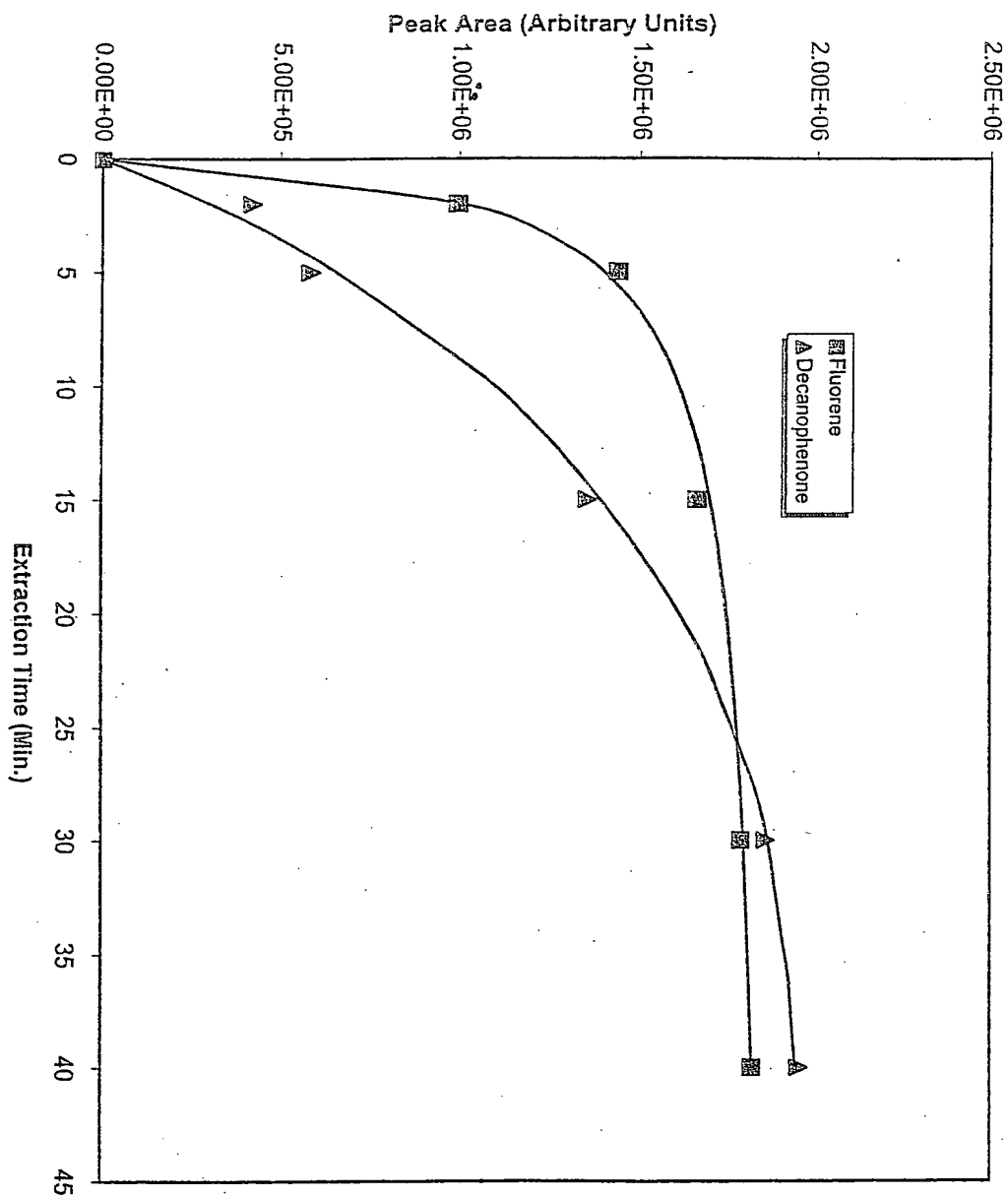


FIG. 15

10001489-102301

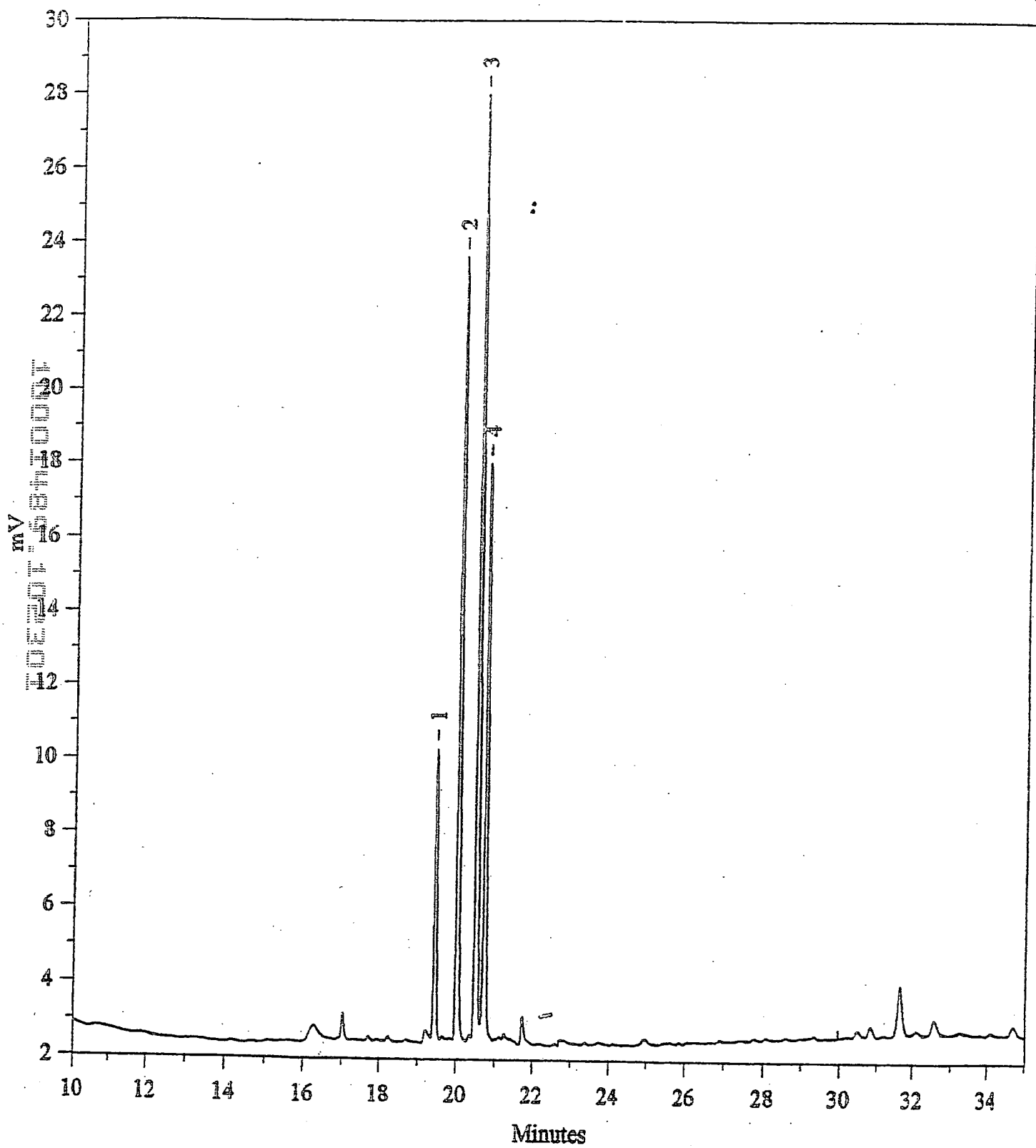


FIG. 16

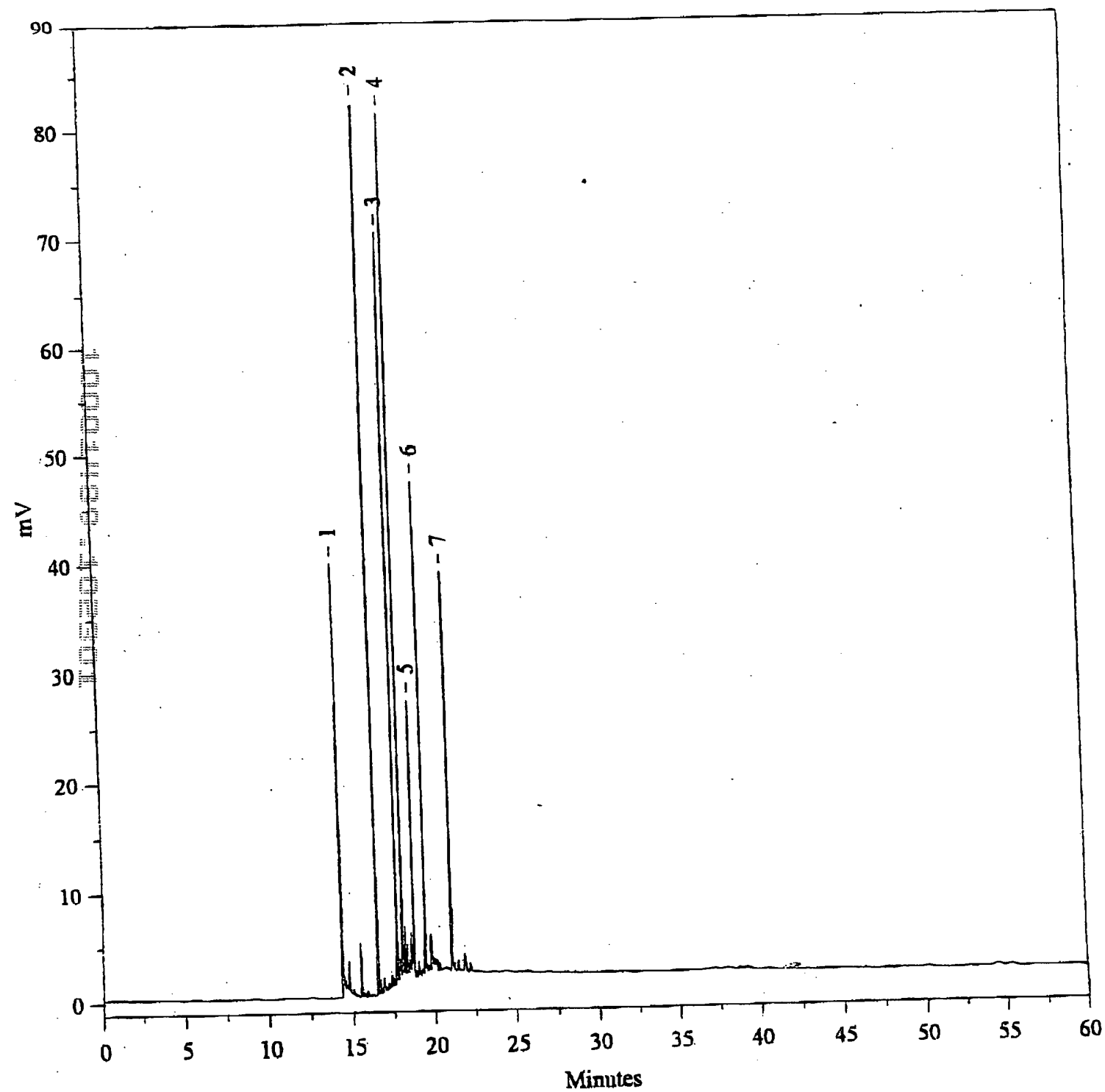
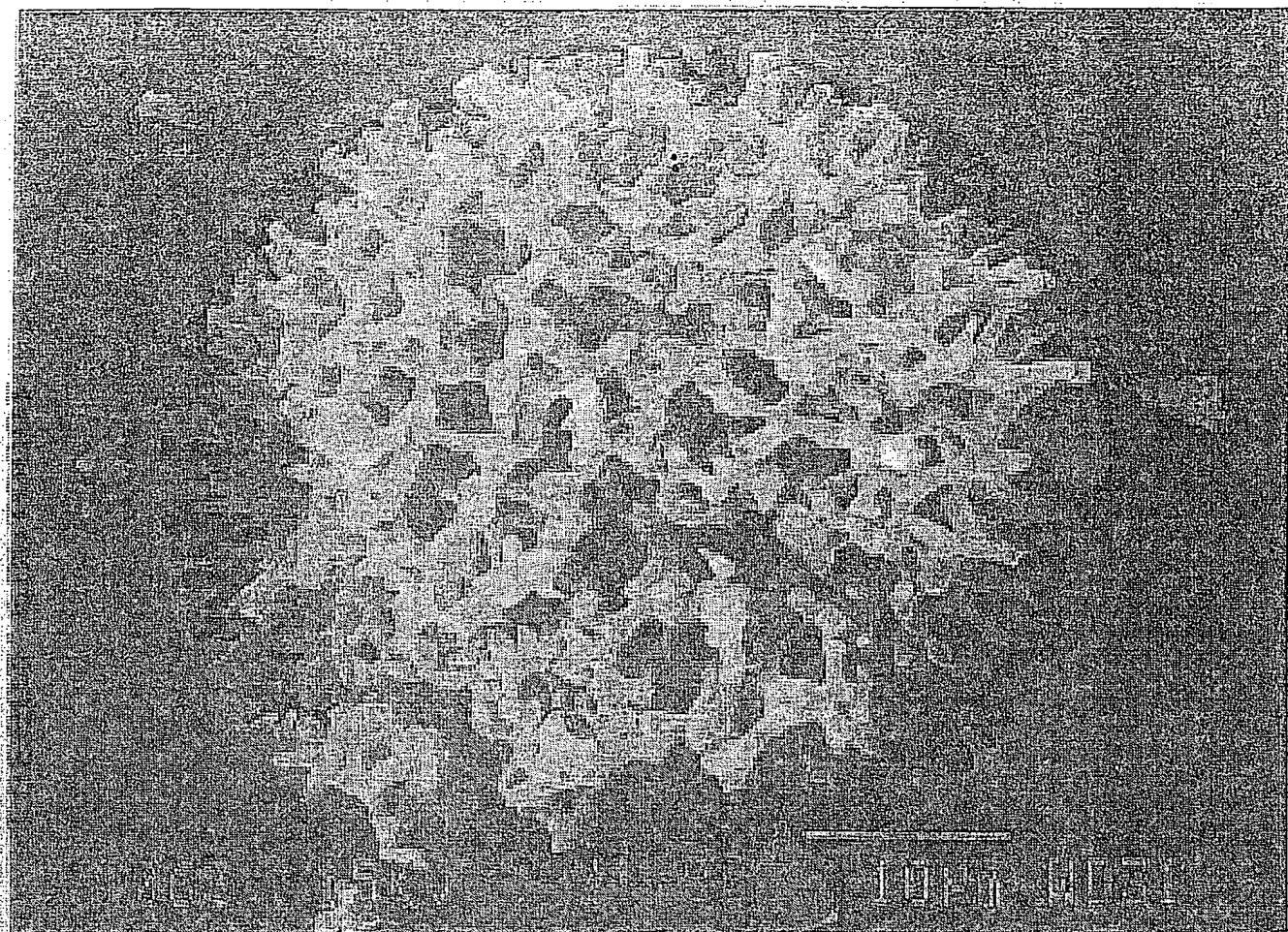


Figure 17



Scanning Electron Micrograph (SEM) Cross-sectional View
of a Fused Silica Capillary with a Sol-gel Monolithic Bed

FIG. 18